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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,471	02/21/2001	Koji Sasaki	1506.1004	6200

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EXAMINER

RUTTEN, JAMES D

ART UNIT	PAPER NUMBER
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2122

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DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/788,471

Applicant(s)

SASAKI, KOJI

Examiner

J. Derek Rutten

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 4,8 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-12 have been examined.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The disclosure is objected to because of the following informalities: A typo on page 1 line 12 lists "C++ etc includes", but should instead read --C++ includes --.

Appropriate correction is required.

4. The disclosure is objected to because of the following informalities: A typo on page 2 line 17 lists "and change", but should instead read --and changes--.

Appropriate correction is required.

5. The disclosure is objected to because of the following informalities: A typo on page 20 line 18 lists "//initialize variable", but should instead read --//)initialize variable--.

Appropriate correction is required.

Claim Objections

6. Claim 2 is objected to because of the following informalities: A typo in line 2 results in "may controls", which should be --may control--. Appropriate correction is required.

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7. Claims 4, 8, and 12 are objected to because of the following informalities: A typo at line 7 of claims 4 and 12, and line 6 of claim 8, results in the phrase "a iteration", which should be -- an iteration--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 2, 4, 8, 10, and 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. The term "may" in claim 2 is a relative term which renders the claim indefinite. The term "may" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear what conditions are necessary for the specification generating program to control the computer. For the purpose of further examination, this claim has been interpreted without the term.

11. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "sequential statement" in claim 4 is used by the claim to mean "non-control statement", while the

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accepted meaning is “an ordered arrangement.” The term is indefinite because the specification does not clearly redefine the term. The term has been interpreted as referring to “straight-line code” or non-control statements.

12. Claim 4 recites the limitation “the group” in line 11. There is insufficient antecedent basis for this limitation in the claim. For the purpose of further examination, this limitation has been interpreted as --a group--.

13. Claim 8 is a method version of claim 4, and suffers the same problems as that claim.

14. Claims 10 and 12 are system versions of claims 2 and 4, respectively, and suffer the same problems as those claims.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claim 1, 2, 4-6, 8-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant’s own admission of prior art (pages 1-4 of the originally filed specification - hereinafter referred to as “APA”) in view of U.S. Patent 4,819,233 to Delucia et al. (hereinafter referred to as “Delucia”).

As per claim 1, APA discloses:

a step of disposing a comment statement at a position where a comment statement in a source code can be disposed (page 1 lines 11-13: “Generally, a source code written in a programming language such as C++ **etc includes comment statements** which are not converted into an object code even if compiled.”);

a step of generating specification data by extracting the comment statements (page 1 lines 18-20: “Therefore, a specification generating system for automatically generating a program specification by extracting the comment statements from the source code, has been utilized.”); ;

a step of changing the comment statement in the specification data in accordance with an indication of changing the data, if the indication is given through the input device (page 1 lines 23-24: “a function used for an **operator to edit** the generated specification” page 2 lines 16-18: “To be specific, the operator **inputs** additional information and **changes** the description to correct the specification”).; *and*

a step of replacing the comment statement in the source code with the comment statement in the specification data (page 1 lines 25-26: “a function of **updating** the comment statements in the source code **based on the edited specification**.”).

The APA does not expressly disclose a computer readable medium connected to a computer with a display device, displaying specification data on the display device, or a unique comment keyword which relates the source to the specification.

However, in an analogous environment, Delucia teaches the use of a computer readable medium connected to a computer with a display device (FIG. 15; column 3 lines

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28-33: “This system includes a general purpose digital **computer** 54, which in the exemplary system was a VAX computer. The processors as well as the target program are stored in **disc storage** 55. A **display terminal** 56 provides the **interactive** interface with the verifier for selection of the target unit and test case data”). Further, Delucia teaches the use of unique block identifiers which are inserted as comment statements and extracted as pseudocode for reference to the associated position in source code (column 2 lines 19-22: “In instrumenting the source code, non-executable comments with a **unique block identifier** are inserted at the beginning and end of each block of the target unit of code.”; also column 2 lines 48-51: “The pseudocode contains only the control statements, with comments between identifying the blocks of code **using the same identifiers** as the instrumented code.”).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use APA’s specification generator with Delucia’s computer system and unique block identifiers. One of ordinary skill would have been motivated to add unique identifiers to comments to use as markers for relating a generated pseudocode or specification back to the original source code for the purpose of verification, implementation, or documentation.

As per claim 2, the above rejection of claim 1 is incorporated. Further, APA suggests *disposal of the comment statement at a position in an aggregate including processing procedures in the source code* if the position in the aggregate is recognized (page 3 lines 10-15).

In an analogous environment, Delucia teaches disposing comment statements with unique identifiers which relate pseudocode to implementation source code (FIG. 8; column 9 lines 24-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use APA's comment disposition with Delucia's identifiers as a means for relating pseudocode to source code. One of ordinary skill would have been motivated to add unique identifiers to comments to use as markers for relating a generated pseudocode or specification back to the original source code for the purpose of verification, implementation, or documentation.

As per claim 4, the above rejection of claim 1 is incorporated. Further, APA does not expressly disclose *wherein said specification generating program controls the computer to execute said disposing step so as to dispose the comment statement including the comment keyword at a position adjacent to a statement selected from a group consisting of a head statement of consecutive sequential statements, a non-consecutive sequential statement, a iteration statement, a selection statement and a branch statement in the source code.*

However, in an analogous environment, Delucia teaches disposing the comment statement including the comment keyword at a position adjacent to an iteration statement (FIG. 8 "BLOCK 03").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use APA's specification generator with Delucia's comment

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disposal method. One of ordinary skill in the art would have been motivated to uniquely identify control statements to aid in relating source code with a specification when refining a design.

As per claims 5,6, and 8, APA discloses a method (page 1 lines 21-26). All other limitations have been addressed in the above rejections of claims 1, 2, and 4, respectively.

As per claims 9, 10, and 12, APA discloses a system (page 1 lines 18-20). All other limitations have been addressed in the above rejections of claims 1, 2, and 4, respectively

17. Claims 3, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of APA and Delucia as applied to claim 1 above, and further in view of the Abstract of Japanese Patent Number JP404055938A to Naota (hereinafter referred to as "Naota").

As per claim 3, the combination of APA and Delucia does not expressly disclose *inserting the comment keyword in a comment statement already included in the source code.*

However, in an analogous environment, Naota teaches adding keywords to extracted comment statements for specification generation ("comment addition part 7" in the *Constitution*).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the specification generator of the combination of APA and Delucia with Naota's "comment addition part". One of ordinary skill in the art would have been motivated to produce easy-to-understand specifications of previously existing commented source code.

As per claim 7, all limitations have been addressed in the above rejections of claims 3 and 5.

As per claim 11, all limitations have been addressed in the above rejections of claims 3 and 9.

Conclusion

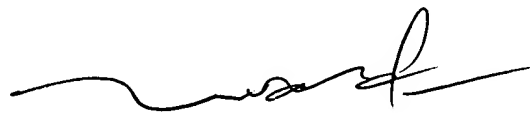
Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (703) 605-5233. The examiner can normally be reached on M-F 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jdr



TUAN DAM
SUPERVISORY PATENT EXAMINER